

CREATIVE ENGAGEMENT: HANDWORK AS FOLLOW-UP WORK

by Ellen Lebitz

"To a great extent, we all must "do" in order to learn." Ellen Lebitz begins with this overarching truth as a lead-in to a close look at handwork in the elementary environment. She explains the benefits of handwork for the second-plane child, including it being a key to helping "even the most distracted children find focus and interest." She gives concrete examples of handwork (mostly as follow-up work) along with tips for implementation, including maintaining a clean-up routine and having materials organized and available. She addresses teamwork in handwork, issues of scale, and poses handwork as a grounding route to abstraction. Supported by invaluable tools for the teacher to use, her enthusiasm and experience with this work shines through as encouragement to be prepared and, most importantly, to trust in the child: "It would be so easy to just assume that we know what the best follow-up is, but the children need to be free to figure out themselves what they are interested in and on what they want to work. Once we make a particular project an expectation, then we are taking away the 'spontaneous' part of the spontaneous activity in education. We have to make peace with the idea that some follow-up will be not as we expect, will fizzle out, but, sometimes, will exceed our wildest expectations. All of this is part of the process; we have to let go of our 'favorite' projects and let the children be free."

In this more advanced period [the second plane] we continue to afford children the opportunity to learn through the activity of the hand. (To Educate the Human Potential 8).

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THE WORK OF THE HAND

At the time of her first contemplation into the developmental needs of children, Maria Montessori recognized the human desire, the need, to manipulate and work with the hands. Her observations of the children in the asylum in Rome sparked her curiosity into the role of the hand in the neurological development of the child. In complete contrast to the typical school of the time that relied on rote memorization and recitation, Montessori sought out educational techniques that utilized movement and manipulation. Many years later and much further into her work with children, she wrote in *The Absorbent Mind* a summation of her discoveries:

He [the child] becomes fully conscious and constructs the future man, by means of his activities. He is directed by a mysterious power, great and wonderful, that he incarnates little by little. In this way he becomes a man. He does it with his hands, by experience, first in play and then through work. The hands are the instruments of man's intelligence. (26-27)

To a great extent, we all must "do" in order to learn. It isn't enough to watch someone practice the piano or to observe someone tie a shoe in order to become proficient at these undertakings. It is only by our direct activity that we can learn these tasks. Intellectual tasks, too, can have a physical manifestation and through work and manipulation can reveal new perspectives and enhance our understanding. A clear example comes from our grammar work with the preposition. The preposition is a part of speech that can be rather on the fringes of most adult's understanding of grammar, and so it is quite effective to demonstrate at a parent night. While the function of a

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preposition can be explained or its definition be stated, when we play a game (and this is very fun to do with parents) where we must all stand *behind* our chairs, stand *next* to our chairs, stand *in front of* our chairs, stand *on* our chairs, the preposition is *experienced* and that is when it is truly understood. Nearly every time I've done this introduction with the parents I've had at least one come up to me to let me know that they hadn't truly understood what a preposition was until that parent night. That is the power of experience.

We all know about the human tendency to work. The children do want work that is meaningful to them. In *From Childhood to Adolescence*, Montessori says that the role of education "is to interest the child profoundly in an external activity to which he will give all his potential. We are concerned here with bringing him liberty and independence while interesting him in an activity through which he will subsequently discover reality" (11). The tendency to work is very powerful, but the work must be freely chosen and not imposed. It has to be meaningful to the child and satisfying. When we can provide these conditions then we will build a culture of work. When Montessori observed the children's spontaneous work, she, herself, struggled to believe that children allowed to choose their own activities could or would pursue work. She describes it during the 1941 course:

The child has a natural and irresistible tendency towards work. This principle (it is not the one commonly held), should be well fixed, and very clear in our minds. When I observed this phenomenon I was surprised, and it led me to think, to ponder and to doubt for a long time until I was convinced. The tendency to work is tied up with the nature of the child, and therefore with human nature. When the child is left free to work in an environment prepared for him when he is free to act, he has the tendency to organize a set of movements around an idea, which constitutes a definite aim—work. (*Creative Development in the Child: Volume 1* 60)"

HANDWORK AS FOLLOW-UP

In a Montessori environment, handwork is often thought of as separate from the rest of the work of the children. Handwork is

encouraged in most Montessori environments, as it should be, and there are clear benefits in handwork for its own sake. Handwork is fun and people generally enjoy working with their hands. There is great pleasure and satisfaction in creating something—to have an idea in your mind and bring it to fruition. Also, the materials used can be very satisfying. Different materials have different qualities and children (and adults) develop preferences through experience.

Handwork, though, can be integrated into Cosmic Education in so many ways. In thinking of handwork *as a medium of exploration* about a subject (as we think of writing about, reading about or discussing a subject) and not as a separate activity, we open the doors to follow-up activities in which the children can expand their skills, make discoveries, and think creatively. In working with polygons, a child might also learn about using a vice to secure a piece of wood into which she drills holes with a hand drill. In follow-up to angles a child might decide that needle-felting yarn onto a sheet of felt is a great way to explore the types and nomenclature of this new idea in geometry. One medium may call to the children for one specific project and then another medium for another project. Executing the



Making geometric solids with felt.

work regardless of the final product can be soothing and gratifying. Finding just the right handwork, often sewing or clay, can really help reset and reorganize a child who is feeling overwhelmed or distracted. The child might need time and coaching in the beginning and there will certainly be some trial and error, but this type of work can have astounding results.

Those of us who work in the classroom use Montessori materials each day, inspiring exploration with the hands and mind. These Montessori materials provide the child with keys to understanding many aspects of the world and universe. The children, in their work with the materials, experience the ideas. There is something powerful in actually tearing a sentence apart in order to analyze it, rather than just parse it on paper as I did in seventh grade. Physically tearing or cutting it apart makes an impression that is lost when doing the work purely in the abstract.

The follow-up work that the children do after a presentation and the work they do when pursuing their own interests can be similarly experiential. So many of the keys we present to the children are able to be pursued utilizing handwork. Handwork becomes more than just follow-up to a presentation: It becomes a way for the child to practice designing, planning, and executing a project. It becomes a practice in collaboration and self-discipline. Handwork can be the method by which the teacher can help even the most distracted children find focus and interest.

Handwork appeals to the social nature of the elementary child. So much of what the children can do is collaborative in nature. Planning and agreeing on the execution of a project is an enormous task—one in which the children revel. If the teacher has been diligent in creating diverse groups for presentations there can also be surprising combinations of children who choose to collaborate with each other. It is so heartening to see two children who are usually not in contact with each other decide to team up to work on a project and to observe this type of culture develop within the prepared environment.

Handwork leads to experiences in spatial relationships. In making something, especially in three dimensions, one is confronted with a

picture of an idea that can be quite different than when presented on a surface. An example with which all elementary Montessori practitioners can readily relate is the work with the geometric box of sticks. The three sides of the triangle are readily counted when drawn on a piece of paper, but it is only when we make it with sticks and pick it up and compare it to other polygons made with sticks that we can experience the awesome stability of that triangle. Making it in a way that it becomes an object gives a very different perspective of a triangle than the picture on the paper.

In this same way, many aspects of what the children explore become apparent when physically experienced, aspects that would be otherwise lost by studying it some other way. Making a flower out of clay or silk requires one to examine how the petals are attached, the position of the ovary, whether or not there are sepals, if it has both stamens and pistil or just one of those. How many petals? Are they attached or separate? In the making, all that we would want the child to notice becomes a part of what is studied in order to reproduce it.

The need for some expertise with whom to consult about some aspect of a craft is a wonderful segue into going out. Often craftspeople are very generous with their time when children are involved. If the children need some advice about some aspect of their project, often a trip to a locally owned art or craft store yields an expert. A university or a local craft guild can also lead to collaboration with someone outside of the school. I've had children who were weaving in class visit a weaver who gave them tips and showed them real weaving tools. One child visited a potter and then managed to procure the loan of a tiny test kiln. That child facilitated a project to make ancient Egyptian style scarabs out of clay with a bisque and a glaze firing in that teeny kiln.

DEVELOPMENTAL BENEFITS

Children show a great attachment to the abstract subjects when they arrive at them through manual activity. (*To Educate the Human Potential* 9)

One of the very practical aspects of handwork is the development of motor control. I have not found a better way to help a child

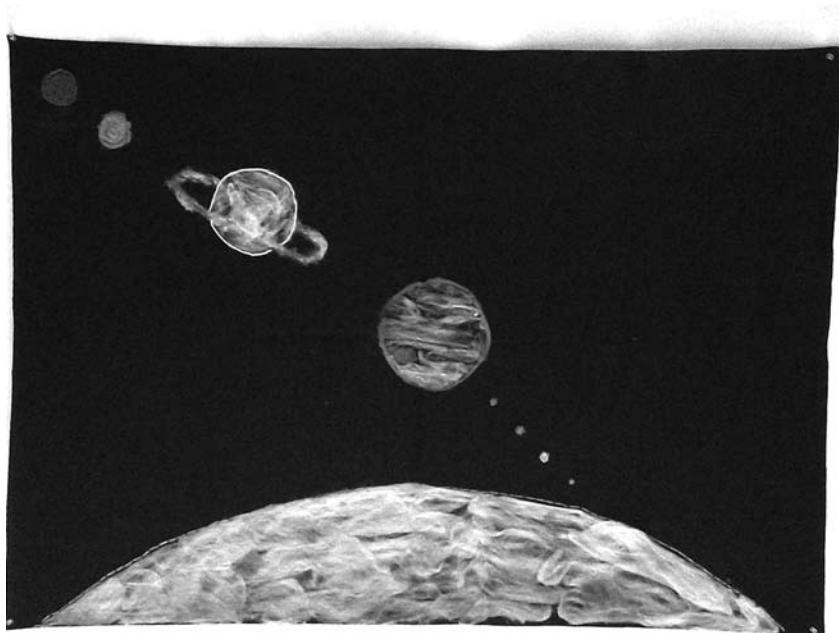
improve their handwriting than by getting them interested in sewing. Nearly every fine-motor challenge has a handwork suitable for helping assist its development. Whether it is strength (in which case, clay work is so useful); or precision of movements (then sewing helps); or in coordinating movements (weaving, origami, and paper



Model of Roman gladiators, approximately 14 inches tall.

cutting can assist this), handwork can assist in the development of motor skills. If a child has anxiety around a skill or subject, helping them do handwork is a subtle way to shift the direct focus to learning a new skill or craft while still addressing the child's unique needs. Children with fine motor challenges may be excited to sew or weave, though they might be less inclined to practice writing if it has already proven to be a frustrating task.

Handwork can be a route into academics for children who might be daunted by traditional academic work. Handwork is such a great tool for building trust with the children, and when the children trust us then they are willing to take a journey with us into unfamiliar work or activities. While hopefully the children moving into our classes from primary or lower elementary already have a joyful idea of work, this is often not the case for children transferring in from a more traditional school setting. These children often have prejudices about certain subjects or ideas about themselves and how skilled they are.



Needle-felted sun and planets of the solar system to scale by size. Overall piece is about three feet wide and four and a half feet tall.

For example, I have noticed that children transferring in from traditional programs often have significantly less knowledge of political geography than children who have been in Montessori since primary. Getting those children started making maps, all different types of maps, is a great help. I'm not speaking of labeling black-line masters, but creating maps with their hands. If they are



Making a three-dimensional map of a fictional land from literature.

comfortable drawing a map freehand, then they can do this. Then, depending upon what the focus of the map is, they can hand color it with paint, they can transfer the lines to fabric and embroider it, they can mount a map and then use paper maché or salt dough to make relief maps. Judiciously help a child like this to find a suitable group, very small at first, with whom to collaborate. If they don't feel confident drawing a map, then a blackline master can do for now, but be sure as their confidence increases, to show them how to use a grid to enlarge a map. For a child used to having to study and memorize from a worksheet or a textbook, the idea of using their hands to create something special and beautiful is often so appealing. It helps the child feel that the adult is someone who will provide purposeful work. Also, it helps a new child, used to working alone, learn to collaborate with others.

Handwork can result in great concentration and engagement. Even those children who have challenges staying attentive to some kinds of work often can become very focused on just the right handwork. For a child with great attention challenges, the teacher can start with small and quickly finished projects and help them sustain attention on a high-interest task for short periods. Gradually help increase the time spent—the work with the hands can be quite engaging. As the child develops focus through handwork, often there is a correlating increase in their ability to focus on non-handwork tasks as well.

PRACTICAL CONSIDERATIONS

It is crucial to develop a thriving culture of handwork in your classroom, but teachers are sometimes at a loss if that culture is not already present. Especially when beginning a new class, when the children may not have older peers who have had a lot of experience with handwork, the adult must provide much of the inspiration and modeling. Sometimes children benefit from indirect presentations. A teacher can do a project for themselves, either in front of the children or at home. These projects can be shown to the children with true enthusiasm and excitement, "Look at what I did! I'm so excited about this book I'm reading that I recreated the main character's house in a diorama."

The children can also benefit from collaboration with the adult when the handwork culture is developing. The teacher can take the time to sit with the children and show them some ideas. Follow the interests of the children, but show specific techniques. For example, after the sensorial presentation for the surface area of solids, get out some large sheets of felt. Trace the faces of the solid. Be focused, be deliberate, be careful. Cut each piece out carefully. If the children are curious tell them, "I want to try to make these in felt—I think it

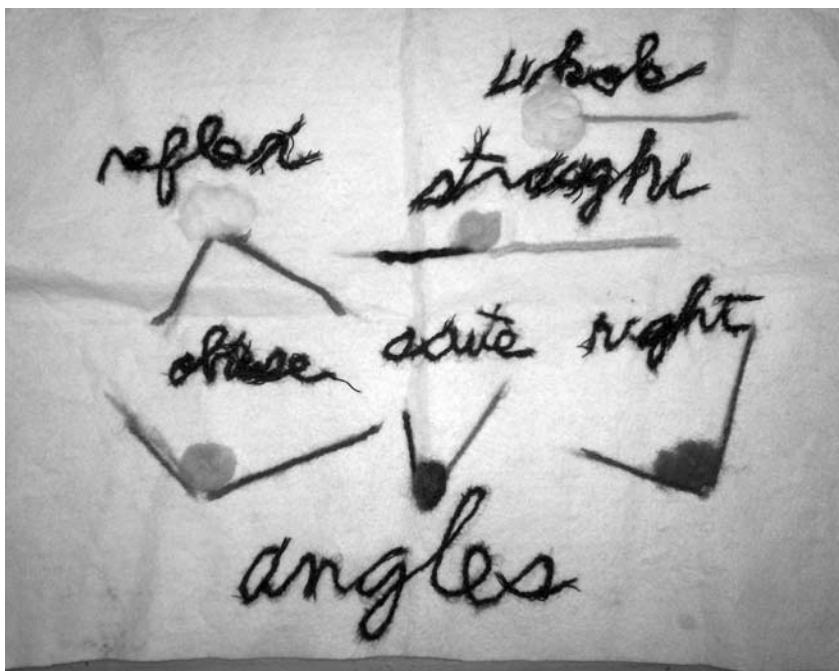


High Rhulain, a character from the Redwall book series, about six inches tall.

will work well and look nice!" Don't necessarily invite them—let them watch and, hopefully, invite themselves or ask. Any time the adult wants to introduce a skill, they can simply start by taking the work out themselves and doing it in front of the children.

As with all parts of the environment where the children are given real tools, the teacher must demonstrate safety and use of each tool. The teacher must also be confident enough to withhold the use of any possibly dangerous tool if there is any doubt as to how a child may use it. Whether a specific tool or substance is on the shelf or kept by the adult and retrieved by approval each time it is used is up to the discretion of the teacher. How this is handled may change from year to year depending upon the group of children in the class. The teacher is ultimately responsible and must research substances used and keep all relevant data sheets and safety equipment needed on hand.

For each new skill or use of material the teacher should demonstrate and expect good clean-up. Good clean-up habits will keep



Needle felted "types of angles" made by first year elementary students.

the teacher from being frustrated and therefore being tempted to limit the work. Of course it must be the children's work, but, at first, they often need our experience to guide their approach to a project. At the same time, though, we must be cautious to not limit the children or constrain them out of convenience. We also have to resist taking over the planning or execution of the ideas—often the children come up with things far beyond what we could imagine. We must keep in mind that even if we are providing assistance or advice, it isn't our project. There has to be freedom to explore and try new things and new combinations.

For the best success in developing a culture of handwork as follow-up, there must be high-quality, deliberately chosen materials that are well-displayed. The polymer clay must be clearly distinguishable from the plasticine or the pottery clay. The paper for folding must be clearly different than the watercolor paper. Show the children proper use and care and storage of the materials. Be sure that your art shelves are not cluttered and that the displays are neat. Some supplies should not be out because they are very expensive or require special care or are simply too bulky or untidy. This has to be addressed and a suitable storage situation developed. It is perfectly acceptable for some supplies to be given out at the discretion of the adult.

Real-world examples are a treasure trove. The children can go out. There are many museum displays that the children may find inspiring to their own creations. History and natural history museums often feature dioramas and models. Photographs can also be shown to the children. There are some wonderful examples of models of ancient Egyptian life at the Metropolitan Museum of Art. Whether through museum visits or photographs, the adult can be sure to express the idea that, "We could do something like that!"

There are no hard and fast rules about scope and scale for handwork. Of course, second-plane children love extremes and want to experience the biggest as well as the smallest. Each scale has its place, and which direction the teacher encourages the children will depend upon so many circumstances. Small scale keeps expenses down, makes projects more manageable, and keeps them from looking sparse. Small projects also require less storage space.

Children have to refine their motor skills to work at that tiny scale. Often a tiny scale helps facilitate a shorter timeline of activity that can help a child come to completion. From experience I've learned that for those particularly prolific children, the parents appreciate small scale at times!

Large scale, though, is sometimes absolutely important. It can create an impression that is less effective at a small scale. It is important to be open to the big! A life-sized giraffe poster that needs to be rolled out in the hall to be experienced brings an up-close size perspective that is lost even by seeing the giraffe at the zoo. Large scale helps the children experience details that might be lost at a smaller scale. Making a larger-than-life sized model of something that is tiny is often the best way to perceive the finer qualities of the subject of the model.

It is acceptable and sometimes necessary to help children change the scope of a project. This is very important. The saying about "biting off more than you can chew" may apply here, reframed as the child's ideas being bigger than their interest or stamina. Perhaps they haven't done every single part of a project they set out to do—if they have lost steam the teacher can encourage them to complete what is able to be completed and call it "done." The children have to follow their interests, and while there is certainly value in bringing projects to completion, we must be careful to not tie a child to a project when the interests of the child now lie elsewhere.

For the children who are chronic starters but rarely finish, help them choose one of their myriad projects, the one for which there is still much enthusiasm or one which is in the most likely state to be finished and help them modify their target and get it done.

There are caveats here though. For some children, having a chronically unfinished project might serve the needs of those children. Perhaps the children have social needs that are being addressed by this project and the ongoing nature of the project is serving the children's needs. As long as a project is still serving the needs of the children, there is no reason to limit its scope or the time period for working on it.

It is in the spontaneous work of the children, based upon their own interest, that they gain the most. What the teacher should avoid is creating a situation in which children don't follow their interests for fear that they will be pushed beyond their interest level. The teacher's skill in learning to balance what can be abandoned and what might be finished can only be developed with experience, and there is not one rule that works for every child—each child has his or her own needs.

Often there are very successful projects that develop into a "trend" in an environment. Children see the work of others and emulate it and soon everyone is interested in a particular way of following up on a lesson or in a particular craft medium. One thing to guard against is the urge to make what has been a successful follow-up by one group a standard part of the lesson.

Even though when we have experienced some follow-up activity that is fun, interesting, or even effective, we must guard against coercing the children into some activity that is not part of the story or presentation. It would be so easy to just assume that we know what the best follow-up is, but the children need to be free to figure out themselves what they are interested in and on what they want to work. Once we make a particular project an expectation, then we are taking away the "spontaneous" part of the spontaneous activity in education. We have to make peace with the idea that some follow-up will be not as we expect, will fizzle out, but, sometimes, will exceed our wildest expectations. All of this is part of the process; we have to let go of our "favorite" projects and let the children be free.

If the teacher is very diligent about clean-up procedures and the children understand these expectations, then everyone is happier. It is often the children, themselves, who will point out misuse. Be prepared, though, for the middle of the day mess. Establish a protocol for having the children, themselves, feel comfortable calling to a group's attention a runaway project and asking for some containment. There should be grace and courtesy around how to do this. Expect that there will be some level of mess during the day. When the teacher has established a culture of responsibility then the children will attend to it at the necessary time of the day or when their attention is drawn to how it is impacting others.

If the teacher is clear about expectations, provides the tools, supplies, and time needed for clean-up, and is diligent in following up misuse, then the children will live up to those expectations. When the culture is created for a well-tended art area and for an end-of-the day or end-of-the morning clean-up of even the largest mess, then the adult is less frustrated and less inclined to limit big work. Take the time to help the children with this; both the children and the adult benefit.

He [the child] must have absolute freedom of choice, and then he requires nothing but repeated experiences which will become increasingly marked by interest and serious attention, during his acquisition of some desired knowledge. (*To Educate the Human Potential* 7)

A FEW IDEAS FOR HANDWORK IN DIFFERENT DISCIPLINES

Geography: paper maché models of land forms, river valleys, U-valleys, canyons, three-dimensional depiction of orographic rain, models of layers of earth, volcanoes, fold mountains from layers of clay or plasticine, paper maché or salt dough relief maps

Language: models and relief maps of literary places (Middle Earth, etc.); comics or models depicting idioms and double meanings (in a pickle, spilled the beans, head in the clouds); comics, posters, dioramas that explore the history of an unusual or interesting word or phrase (flotsam and jetsam); three-dimensional model of language family tree

History: dioramas, models, sewing costumes (for humans or dolls) from historic periods, masks, relief maps of historic locations or architecture

Mathematics and geometry: sewing polyhedrons out of felt, constructing polyhedrons from cardboard or paper or wire and paper maché, sewing angles on cardboard or mat board

Biology: animal models (in clay or armature and plasticine or paper maché), dioramas depicting animals in habitats, stuffed animal sewings or dolls, skeleton models using clay, models of botanical features in clay or fabric or paper, stamp making/printmaking for parts of or kinds of any animal or botanical feature, embroidery diagrams

Music: models of antique or historical instruments, dioramas or puppet shows of historical persons (composers, artists) in their time and place

Art: exploring the history of a medium, such as tracing the history of painting by trying out various historical media ("cave" painting, egg tempera, frescos using plaster), art history explorations by emulating the style of an artist, exploration of media or genres of art (portraiture, still-life, plein air drawing or painting)

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